

ONEAC® Sinergy® SE II Series Parallelable UPS (4 kVA - 20 kVA): Protecting key electronic equipment from power disruptions and inconsistencies will have a positive financial impact on your business systems. The Sinergy SE II Uninterruptible Power Supply (UPS) features a power conditioned, online double conversion topology to handle irregularities in the electrical system, make brief power disruptions harmless, and provide battery back-up to bridge prolonged power outages.

Advanced technology for superior protection

Many electrical devices and systems respond to power line faults such as voltage or frequency variations, short interruptions, and outages by malfunctioning. In the case of data processing systems, this often causes processing errors and data loss. Or in extreme cases, permanent software and hardware damage. Any of these situations can be costly to your business.

You can protect your devices and systems effectively against these disruptions with ONEAC's Sinergy SE II power conditioned parallelable UPS. Compact dimensions, low noise emissions, and superior design ensure the Sinergy SE II Series UPS can be easily integrated into most any working environment.



True online operation—load is isolated from the AC power:

- Bridges power failure completely without interruption
- Provides consistently good quality power to your equipment
- Safe operation of sensitive loads

Low-impedance isolation transformer on output:

- Provides power conditioned protection to the loads
- Protects equipment from surges and noise
- Clean ground reference

Scalable power and runtimes:

- 4 and 8 kVA units upgradeable to 6 and 10 kVA, respectively
- Parallel two 6, 8, 10 kVA UPSs to obtain 12, 16, or 20 kVA
- Extendable runtimes to 8 hours or more

Low noise and small footprint:

- Problem-free installation
- Unit supplied ready for hardwired connection
- Fits unobtrusively into any environment

Integrated manual and automatic bypass:

- Simplifies maintenance
- Optimizes reliability

Comprehensive front panel control/indicators:

- LCD screen shows status, runtimes and load conditions
- Audible alarm sounds if fault occurs
- No operator control required while running
- Provides detailed control

Quick setup:

- Hardwire the mains to the UPS, connect the UPS to the load, and switch it on

Remote Power Off (RPO):

- Provides emergency shutdown of UPS.
- Integrates into room-wide RPO

Online protection for data, PCs and networks:

- Protects data and hardware from voltage transients and power failure

Computer interface:

- Allows equipment to communicate with the UPS
- MopUPS® PROFESSIONAL available (optional)

Field replaceable batteries:

- Minimizes cost and downtime

Optional UPS communications software and accessories:

- Intelligent responses during prolonged power failures.
- MopUPS PROFESSIONAL for network shutdown and remote management
- Integration with SNMP networks using ManageUPS®NET for UPS and environmental monitoring
- Integrates UPS and computer into one system
- Configurable computer and multi-server shutdown
- Compatible with all major operating systems

2-year warranty:

- Your best assurance of product quality and reliability.

Online topology

The Sinergy SE II Series UPS operates according to the online principle — connected loads are isolated from the irregularities of the AC power supply without interruption and are supplied instead by the UPS.

The rectifier, which converts the AC voltage to DC voltage, supplies the inverter with power during normal operations. At the same time, the battery is maintained at full charge or is recharged if needed.

The inverter generates sine-wave output AC voltage from DC voltage. The AC voltage level and frequency are extremely stable.

Sinergy's double voltage-conversion decouples the load from the AC power supply and protects it from the following irregularities:

- Voltage variations
- Frequency variations
- Overvoltage/under-voltage
- Voltage peaks
- Interference voltages
- Distorted voltage waveforms

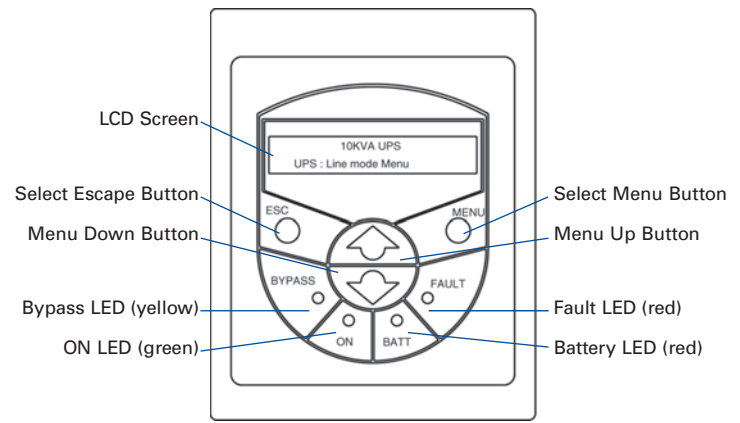
If a short interruption or mains failure occurs, the battery supplies the inverter instantly and without interruption. When power is restored during battery operation, the changeover to normal operation also takes place without interruption.

As no switchover is necessary when power fails or is restored (online operation), this UPS ensures even the most sensitive loads can be operated safely and without problems. If severe or prolonged overloading occurs, the UPS automatically switches to the integrated bypass to support the load.

Comprehensive indicator and control panel

All operational and load conditions are indicated by the LCD screen. The comprehensive LCD screen shows: status, load, runtime, faults and menu controls. The UPS also sends an audible warning signal at 4-second intervals, indicating critical operational conditions. The lower the battery reserve, the shorter the audible alarm interval. Allowing plenty of time to save your precious data.

The comprehensive front panel LEDs provide a visual indication of the unit's status at any given time.



Indicator and control panel for the Sinergy SE II Series UPS

Protecting PCs and Networks in a Variety of Applications

The ONEAC Sinergy SE II Series UPS provides reliable support for:

- Workstations
- Servers and networks (LAN, WAN, etc.)
- Data processing equipment and systems
- Telecommunication systems
- Voice over IP
- ISDN systems
- Whole Store POS systems
- Computer centers
- Air-traffic control systems
- Safety systems in power stations
- Retail information systems
- Transport systems
- Medical imaging and diagnostic equipment
- Business system machinery
- Broadcasting studios
- Semiconductor test equipment
- Semiconductor manufacturers
- Process controls
- Control centers/SCADA systems
- Drives in continuous production processes
- Production and automation systems
- And more

Generator Friendly

The true online double conversion topology easily supports generator applications. Frequency and voltage regulation means that even older generator transfer switches can be accommodated without problems.

Frequency auto-detection, coupled with an extremely broad input voltage tolerance window, allow for a wide variety of utility line variances without interfering in the UPS operation and support of your critical loads. Cascading circuit protection means that after an extended overload, the UPS will engage a self-protection sub-routine locking out the inverter and transferring the load to bypass source utilizing the appropriate feeder circuit protective device. Overloads can be endured for minutes and hours, not seconds!

Scalable Sizing

All ONEAC Sinergy SE II UPS runtimes can be expanded by adding additional battery cabinets. Back-up times of up to two hours can be achieved in any load operation by using line up and match battery cabinets. For longer support, non-matching cabinets can be used to reach 8 hours or more.

Sinergy SE II allows you to build on your original investment. In order to accommodate application growth, the 4 kVA model can easily be upgraded to 6 kVA, and 8 kVA to 10 kVA, without shipping the unit off-site. The 6 kVA, 8 kVA, 10 kVA, models can be paralleled to support 12, 16, and 20 kVA loads, respectively.

Paralleling

Up to three Sinergy SE II UPSs can be paralleled for capacity and redundancy, increasing the supported equipment's overall reliability and availability.

Remote Power Off (RPO) Adapter

The RPO is standard on all Sinergy SE II Series UPSs. If the RPO contacts are opened, the UPS immediately shuts down.

The RPO circuit may be extended by connecting normally closed switches in series between the RPO connect pins. This activates any of the series switches, causing the UPS to shut off its output.

Communications Interface

All Sinergy SE II UPSs are equipped with an interface COM port allowing serial communication when used with ONEAC MopUPS communications software. In combination with the additional UPS software, this serial interface enables a host of key monitoring functions.

MopUPS PROFESSIONAL Communications Software and cable are optional with the Sinergy SE II for UPS and battery monitoring and management.

All Sinergy SE II Series UPSs are equipped with an interface designed for communication with a computer when using ONEAC's supplied MopUPS PROFESSIONAL software. If the connected computer is informed of a power failure via the interface, it can shut down its program and the operating system in a controlled and orderly manner within the battery's back-up time.

The computer/server requires an RS232 interface for communication with the UPS. Optional connectivity accessories include MopUPS PROFESSIONAL software, available for all major operating systems and networks, ManageUPSNET, and environmental monitoring.

ONEAC SINERGY SE II UPS: Optional Accessories

Isolated Contacts Interface Card

An auxiliary interface suitable for Nortel PBX applications. It includes an isolated contacts interface card and an eight foot cable to connect the Sinergy SE II UPS communications port to the PBX (AK-NTMERID-O2).

Power Distribution Units

The Sinergy SE II Series 4 to 10 kVA UPSs features a number of models with a variety of power distribution options. A ten foot flex conduit is provided with every PDU installed. The PDUs are installed at the factory before delivery. Call ONEAC for details.

Power Cords

Optional ten foot power cords are available for the Sinergy SE II 4 kVA UPS (L6-30P) and 6 kVA UPS (6-50P). Call ONEAC for details.

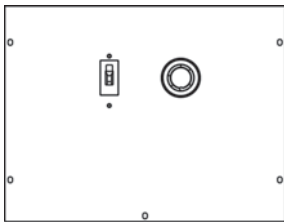
Connectivity

MopUPS PROFESSIONAL software enables a wider variety of responses to faults and other events that affect the UPS and the equipment they protect.

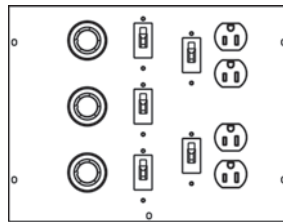
ManageUPSNET adapter provides web and SNMP-based UPS and environmental monitoring. It can also be used as a server for multiple MopUPS clients in order to facilitate wide area network shutdowns from a single UPS.

Part Number	MopUPS	ManageUPSNET
	SK-PROMOP-02	AM-00-0
System shutdown	•	via network
Event messaging	via email, page, network, or SNMP traps	via email or SNMP traps
Log events	•	•
Run a command, script or batch file	•	
Web-based system management		•
Full SNMP server		•
Supports Terminal, Telnet, and FTP access		•
Environmental monitoring		•

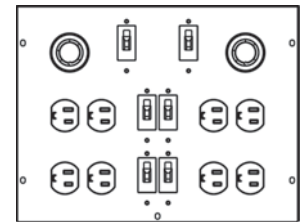
Optional Power Distribution Units for Sinergy SE II Series (4 - 10 kVA)



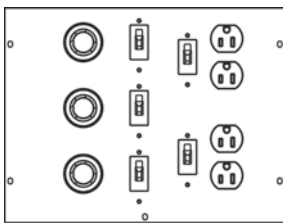
PDU Code	Receptacle
SPDU-M	(1) L6-30R



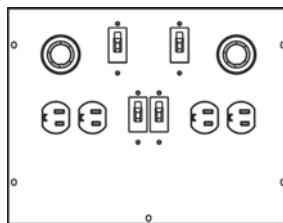
PDU Code	Receptacle
SPDU-N	(3) L6-30R & (4) 5-20R



PDU Code	Receptacle
SPDU-P	(2) L6-30R & (8) 5-20R



PDU Code	Receptacle
SPDU-S	(1) L6-30R & (2)L 6-20R & (4) 5-20R



PDU Code	Receptacle
SPDU-T	(2) L6-30R & (4) 5-20R

ONEAC SINERGY SE II UPS: Specifications

Performance Characteristics

Nominal input voltage: 200, 208, 220, 230, 240

Available output voltage: 120/208/240 models with AT in the part number
120/208/230/240 models with IT in the part number
100/200 models with JT in the part number

Surge voltage withstand capability: ANSI/IEEE C62.41 Cat. A & B

Crest factor: 3:1

Principle of operation: online, double conversion

Batteries: sealed, maintenance-free lead acid, VRLA

Battery test: automatic, once per month (adjustable through optional UPS management software)

Battery management: automatic runtime adjustment, protection against deep discharge

Recharge time to 90% available capacity: 5 - 8 hours (internal batteries)

Relative humidity: 20-90%, no condensation

Alarms: mains power, low battery, overload, on bypass

Cooling: fans

Frequency: 50/60 Hz \pm 5%, auto-select

Frequency tolerance, normal operation: output frequency synchronized with mains frequency

Frequency tolerance, power failure: \pm 0.5% (internal frequency generator)

Total harmonic distortion (linear load): < 4%

Automatic bypass: integrated

Output Waveform: sinusoidal

Internal maintenance bypass: integrated

Overload capacity: 104%: warning; 105-125%: 60 seconds: switches to bypass; 126-150%: 10 second, switches to bypass; >150%: 2 seconds: switches to bypass

Port: (1) serial standard

COM slot: (1) for SNMP/web interface/isolated contact card

RPO input: standard

Operational temperature: +32°F to +104°F (+50°F to +77°F recommended for optimal battery life)
+0°C to +40°C (+10°C to +25°C recommended for optimal battery life)

Storage temperature: +5°F to +122°F (-15°C to +50°C)

EMC: FCC part 15, class A, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4 EN61000-4-5

Approvals

Sinergy SE II Series UPSs: UL/cUL listed to 1778, TUV, and CE.

UPS MODEL	SINGLE UNIT MODELS				PARALLELED UNIT KITS		
	SE041	SE061	SE081	SE101	SE122	SE162	SE202
Basic Configuration	SE041XAT SE041XIT SE041XJT	SE061XAT SE061XIT SE061XJT	SE081XAT SE081XIT SE081XJT	SE101XAT SE101XIT SE101XJT	SE122XAT SE122XIT SE122XJT	SE162XAT SE162XIT SE162XJT	SE202XAT SE202XIT SE202XJT
Power rating (VA/W)	4000 VA/2800 W	6000 VA/4200 W	8000 VA/5600 W	10000VA/7000W	(2) 6000 VA/4200 W for 12000VA/8400W	(2) 8000 VA/5600 W for 16000VA/11200W	(2) 10000VA/7000W for 20000VA/14000W
Output current (A) @ 208 Vrms	19.2	27.9	38.4	46.0	55.8	76.8	92.0
Internal battery	(20) VRLA, 12V 7ah	(20) VRLA, 12V 7ah	(20) VRLA, 12V 9ah	(20) VRLA, 12V 9ah	(40) VRLA, 12V 7ah	(40) VRLA, 12V 9ah	(40) VRLA, 12V 9ah
Communications software	optional MopUPS PROFESSIONAL available				Optional MopUPS PROFESSIONAL P/R available		
UPS dimensions HxWxD* (in.)	31.4x11.8x26.6	31.4x11.8x26.6	31.4x11.8x26.6	31.4x11.8x26.6	31.4x11.8x26.6 each	31.4x11.8x26.6 each	31.4x11.8x26.6 each
HxWxD* (cm)	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6	80.0x30.0x67.6 each	80.0x30.0x67.6 each	80.0x30.0x67.6 each
UPS net weight - lbs (kg)	325 (148)	325 (148)	380(173)	380(173)	325 (148) each unit	380(173) each unit	380 (173) each unit
UPS ship weight - lbs (kg)	380 (172)	380 (172)	440 (200)	440 (200)	380 (172) each unit	440 (200) each unit	440 (200) each unit
Input connection	HW**	HW**	HW	HW	HW	HW	HW
Output connection***	HW	HW	HW	HW	HW	HW	HW

* Add 3.75 inches (9.5 cm) to Depth for PDU.

** Optional PDUs available.

*** Optional ten foot power cord available (4 kVA - 10' power cord with L6-30P; 6 kVA - 10' power cord with 6-50P). Call ONEAC for details

External Battery Part Number

SEBP610-2

Battery	(40) VRLA, 12V 7ah
Dimensions HxWxD - in	31.4 x 11.8 x 26.6
HxWxD - (kg)	(80.0 x 30.0 x 67.6)
Net weight - lbs (kg)	312 (142)
Ship weight - lbs (kg)	356 (162)

ONEAC SINERGY SE II UPS: Individual Specifications

Sinergy UPS*	kVA	Runtimes (half load/full load)	Quantity UPS	Quantity External Battery Cabinets	Input/Output Connectors
SE041	4	37/15	(1) SE041	None	HW**
SE041 + one battery	4	156/66	(1) SE041	(1) SEBP610-2	HW**
SE041 + two batteries	4	310/130	(1) SE041	(2) SEBP610-2	HW**
SE061	6	21/9	(1) SE061	None	HW**
SE061 + one battery	6	84/39	(1) SE061	(1) SEBP610-2	HW**
SE061 + two batteries	6	175/78	(1) SE061	(2) SEBP610-2	HW**
SE081	8	21/6	(1) SE081	None	HW
SE081 + one battery	8	73/23	(1) SE081	(1) SEBP610-2	HW
SE081 + two batteries	8	140/45	(1) SE081	(2) SEBP610-2	HW
SE101	10	13/5	(1) SE101	None	HW
SE101 + one battery	10	60/18	(1) SE101	(1) SEBP610-2	HW
SE101 + two batteries	10	117/35	(1) SE101	(2) SEBP610-2	HW

Sinergy Parallel Kits	kVA	Runtimes (half load/full load)	Quantity UPS	Quantity External Battery Cabinets	Input/Output Connectors
SE122	12	21/9	(2) SE061	None	HW
SE122 + two battery	12	84/39	(2) SE061	(2) SEBP610-2	HW
SE122 + four batteries	12	175/78	(2) SE061	(4) SEBP610-2	HW
SE162	16	21/6	(2) SE081	None	HW
SE162 + two battery	16	73/23	(2) SE081	(2) SEBP610-2	HW
SE162 + four batteries	16	140/45	(2) SE081	(4) SEBP610-2	HW
SE202	20	13/5	(2) SE101	None	HW
SE202 + two battery	20	60/18	(2) SE101	(2) SEBP610-2	HW
SE202 + four batteries	20	117/35	(2) SE101	(4) SEBP610-2	HW

* Optional PDU available. Call ONEAC sales representative.

** Optional input power cords available.

NOTE: Runtimes are based upon fully charged, new batteries. Runtimes are affected by battery age, ambient temperature, site-specific UPS usage patterns, and actual operating load characteristics. Actual runtimes may vary.

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